Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A biocompatible hydrogel-forming tissue-bonding adhesive composition, the composition comprising:

at least one block copolymer polyol, wherein each hydroxyl of said block copolymer polyol is terminated with a low molecular weight polyisocyanate selected from toluene diisocyanate and isophorone diisocyanate, said terminated block copolymer polyol being liquid and water-soluble;

and wherein said block copolymer polyol is trifunctional and is formed from a reaction between a polyethylene/polypropylene oxide diol of between 800 and 5,000 MW, trimethylolpropane, and the low molecular weight polyisocyanate, and wherein at least 1% of said composition by weight, but not more than 5% of said composition by weight, comprises the low molecular weight polyisocyanate as a free polyisocyanate;

and wherein on average in the composition, 10% to 30% of the monomers of said block copolymer polyol are derived from propylene oxide monomers, and the rest of the monomers are ethylene oxide derived monomers;

characterized in that after polymerization, upon exposure to tissue or water, the adhesive composition forms a hydrogel comprising, after equilibration with water or aqueous fluids, greater than 50% water by volume; and

wherein the composition polymerizes in situ upon exposure to water and application to tissue, without requiring the addition of a catalyst.

2-6. (Cancelled).

7. (Previously Presented) The biocompatible composition as recited in claim 1 wherein said polyisocyanate comprises 2,6-toluene diisocyanate.

8. (Previously Presented) The biocompatible composition as recited in claim 1 wherein said polyisocyanate comprises isophorone diisocyanate.

9. (Previously Presented) The biocompatible composition as recited in claim 1 wherein said polyisocyanate comprises an 80:20 mixture of 2,4- toluene diisocyanate and 2,6-toluene diisocyanate.

10. (Previously Presented) The biocompatible composition as recited in claim 1 wherein said polyisocyanate comprises isophorone diisocyanate and about 1.5% of said composition is the free polyisocyanate.

11. (Previously Presented) The biocompatible composition as recited in claim 1, wherein said composition is comprised of toluene diisocyanate and isophorone diisocyanate and wherein toluene diisocyanate comprises a free isocyanate isophorone diisocyanate is used to endcap said copolymer.

12-50. (Cancelled).

51. (Previously Presented) The biocompatible composition as recited in claim 1, further comprising:

an activating component, consisting essentially of water, optionally containing medically compatible water soluble or miscible materials, which is mixed with the liquid reactive component at the time of application to tissue.

52. (Previously Presented) The biocompatible composition as recited in claim 1, wherein each hydroxyl group of said polyol is terminated with the low molecular weight polyisocyanate without the use of a catalyst, the isocyanate group to hydroxyl group ratio being in the range of 1.5 to 3.0.

53. (Previously Presented) The biocompatible composition as recited in claim 9, wherein about 3% of the composition is free polyisocyanate.